

Application No. 09/594,816
Amendment in response to July 27, 2004, Action

Attorney's Docket No. 0119-002

LISTING OF CLAIMS

This Listing of Claims replaces all prior versions and listings of the claims in this application.

1. (currently amended) An electroacoustic transducer, comprising:
a driver; and

an acoustic horn having an acoustical impedance matched with impedances of an ear and the driver, wherein the acoustic horn has a cross-sectional area that generally increases in one of an exponential, conical, parabolic, and hyperbolic manner from a small end proximate the driver to a large end; and the acoustic horn is about 5 mm in length from the small end to the large end and is about 4 mm wide at the large end.

2. (previously presented) The electroacoustic transducer as set forth in claim 1, further comprising a plate disposed proximate the large end of the horn, the plate having one or more holes therein, and wherein the horn's cross-sectional area at the small end is less than the horn's cross-sectional area at the large end.

3. (original) The electroacoustic transducer as set forth in claim 1, wherein the driver includes a driving membrane.

4. (original) The electroacoustic transducer as set forth in claim 3, wherein the driving membrane has a diameter less than 1 mm in diameter.

5. (currently amended) An acoustic horn having an acoustic impedance matched with impedances of an ear and a driver, wherein the acoustic horn has a cross-sectional area that generally increases in one of an exponential, conical, parabolic, and hyperbolic manner from a small end to a large end; and the acoustic horn is about 5 mm in length from the small end to the large end and is about 4 mm wide at the large end.

6. (previously presented) The acoustic horn as set forth in claim 5, further comprising a plate disposed proximate the large end of the horn, the plate having one or more holes therein, and wherein the horn's cross-sectional area at the small end is less than the horn's cross-sectional area at the large end.

7. (currently amended) A portable device, comprising:
a body;

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a driver mounted inside the body; and

an acoustic horn having an acoustical impedance matched with impedances of an ear and the driver, a large end of the horn extending to a position proximate an exterior surface of the body, and a small end of the horn being disposed proximate the driver, wherein the horn has a cross-sectional area that generally increases in one of an exponential, conical, parabolic, and hyperbolic manner from the small end to the large end; and the acoustic horn is about 5 mm in length from the small end to the large end and is about 4 mm wide at the large end.

8. (previously presented) The portable device as set forth in claim 7, further comprising a plate disposed proximate the large end of the horn, the plate having one or more holes therein, and wherein the horn's cross-sectional area at the small end is less than the horn's cross-sectional area at the large end.

9. (original) The portable device as set forth in claim 8, wherein the plate is part of the body.

10. (original) The portable device as set forth in claim 7, wherein the horn is integrally formed with the body.

11. (original) The portable device as set forth in claim 7, wherein the driver includes a driving membrane.

12. (original) The portable device as set forth in claim 11, wherein the driving membrane has a diameter less than 1 mm in diameter.

13. (original) The portable device as set forth in claim 7, wherein the body forms at least part of a telephone device.

14. (original) The portable device as set forth in claim 13, wherein the telephone device further includes a microphone arrangement.

15. (original) The portable device as set forth in claim 7, wherein the body has an elongated shape.

16. (original) The portable device as set forth in claim 15, wherein the body forms at least part of a writing instrument.

17. (original) The portable device as set forth in claim 7, wherein the body forms at least part of a personal computer.

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18. (original) The portable device as set forth in claim 7, wherein the body forms at least part of a pager.

19. (original) The portable device as set forth in claim 7, wherein the body forms at least part of a personal digital assistant.

20. (cancelled)

21. (cancelled)

22. (cancelled)